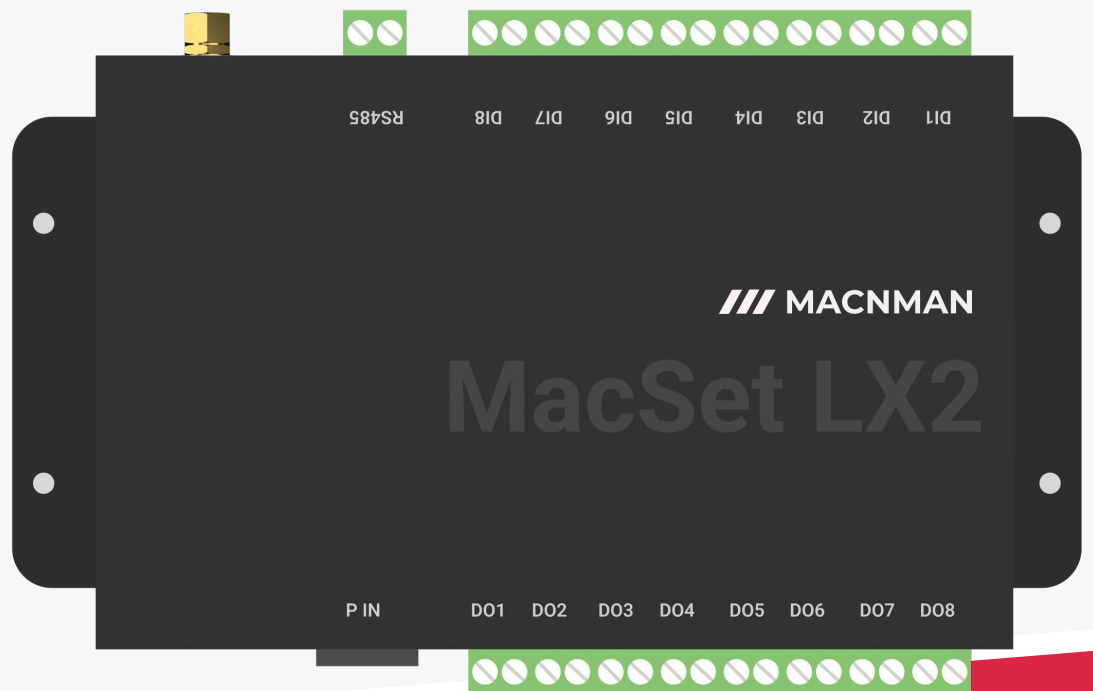




# Industrial LoRaWAN® Remote I/O Controller

## MacSet LX2



## Introduction

The MacSet LX2 is an industrial-grade LoRaWAN® Remote I/O Controller designed for real-time industrial monitoring, remote automation, telemetry, and distributed control applications across factories, utilities, water systems, process industries, energy infrastructure, and smart industrial deployments. The device combines flexible industrial I/O interfaces with long-range LoRaWAN® connectivity to enable scalable wireless automation infrastructure with minimal wiring complexity.

Equipped with 1 × RS485 interface, 8 × Digital Outputs, and 8 × Universal Analog Inputs supporting 4–20 mA, 0–10 V, and Digital Input modes, the MacSet LX2 enables seamless integration with industrial sensors, PLCs, SCADA systems, relays, actuators, and field devices. Built for harsh industrial environments, the controller supports intelligent event-based reporting, BLE-based configuration, OTA firmware upgrades, and compatibility with public and private LoRaWAN® networks for centralized industrial monitoring and automation applications.

## Features

- Industrial LoRaWAN® Remote I/O Controller
- 1 × Industrial RS485 Communication Interface
- 8 × Digital Output (DO) Channels
- 8 × Universal Analog Input Channels
- Selectable 4–20 mA & 0-10 V Input Support
- Compatible with Public & Private LoRaWAN® Networks & Macnman MacTalk Protocol
- Quick Deployment No Wiring Infrastructure Needed
- BLE-Based Configuration via Macnman Maya App
- Scalable Distributed Industrial Automation Support

## Key Advantages

- Enables Wireless Industrial Automation Infrastructure
- Supports Remote Monitoring of Distributed Industrial Assets
- Supports Wireless Switching Across Distributed Locations
- Perfect for Water Management, Irrigation & Utility Control Systems
- Integrates Easily with PLCs, Sensors & Modbus Devices

## Controller Specifications

Relay Outputs	8 × 16 Amps Relay Outputs
RS485 Interface	1 × RS485 Modbus
4–20 mA Analog Channels	8 × Channels (Switchable)
0–10 V Analog Channels	8 × Channels (Switchable)
Digital Inputs	8 × Channels (Switchable)

## RS485 Modbus Input Specifications

Number of RS485 Ports	1 x Independently Configurable
Interface	RS485 Modbus RTU
Modbus Mode	Modbus RTU Master
Baud Rate Support	1200 bps to 115200 bps
Data Format	8 Data Bits, No/Even/Odd Parity, 1 Stop Bit
Slave Devices	Multiple Modbus RTU Slave Devices
Function Codes	Read Holding Registers, Read Input Registers, Write Single Register, Write Multiple Registers
Polling Interval	User Configurable
Communication Direction	Half-Duplex

## 4–20 mA Input Specifications

Number of Channels	8 × Independently Configurable
Input Type	4–20 mA Analog Input
ADC Resolution	12-bit
Sampling Interval	User Configurable
Threshold-Based Alerts	Supported

## 0–10 V Input Specifications

Number of Channels	8 × Independently Configurable
Input Type	0–10 V Analog Input
ADC Resolution	12-bit
Sampling Interval	User Configurable
Threshold-Based Alerts	Supported

## Digital Input Specifications

Number of Channels	8 × Independently Configurable
Input Type	Digital Input
Input Logic	High / Low Detection
Event Detection	State Change Detection Supported

## Wireless Specifications

Wireless Protocols	LoRaWAN® (v1.0.4), Macnman MacTalk Protocol
Antenna	External high-efficiency antenna
Supported Bands	IN865 / RU864 / EU868 / US915 / AU915
Tx Power	Up to 23 dBm @ 865 MHz
Sensitivity	Up to -137 dBm Sensitivity
LoRaWAN® Class	Class A (Default), Configurable to Class C via Maya
Device Activation	OTAA
Supported LNS	Private LNS ,ChirpStack ,The Things Network , MQTT, Orbiwise

## Automation Rule Engine Modes

Regular Mode	Time-based relay automation where relay actions are executed at scheduled timings configured by the user
Trigger Mode	Event-based relay automation using Analog Inputs or RS485 Modbus sensor data to trigger relay actions
Cyclic Mode	Repetitive relay ON/OFF operation based on user-defined cyclic timing sequences

## Device Management

Configuration Method	Via Macnman Maya Android App
Local Configuration	BLE-Based Local Configuration
Remote Configuration	Over-the-Air Configuration (Downlink Commands)
Cloud-Based	Configuration via Macnman IoT platform *
Status LED	1 x Internal Multi-Color LED

## Device Configuration Parameters

Data Reporting Mode	Periodic / Event-based / Hybrid
Transmission Interval	Configurable uplink interval for optimized power consumption
Threshold-Based Alerts	Configurable parameters threshold for event-triggered transmission
Sampling Interval	Configurable data acquisition interval (e.g., 1 min to 24 hours)

## Power Performance

AC Power Input	230V AC
DC Power Input	12–36V DC
Input Power Modes	AC / DC Supported
Protection	Reverse Polarity

## Physical & Environmental Specifications

### Enclosure & Mechanical

Material	Sheet Metal with Anti-corrosion Coating
Protection Rating	IP 35
Dimensions	152 mm × 82 mm × 32 mm
Weight	175 grams

### Mounting & Installation

Wall-mounted installation	Supported
Pole - mounted installation	Supported with External Clip

### Environmental Conditions

Operating Temperature	-40 °C to + 65°C
Operating Humidity	0% to 95% RH (Non-Condensing)

## Regulatory Certifications & Compliance

Wireless Certification	WPC
Environmental	RoHS Compliant

## What's in the Box ?

- MacSet LX2 Device
- Mounting Clip
- User Manual
- Warranty Card
- IP68 Cable Extender \*
- Mounting Screws
- Power Adapters \*

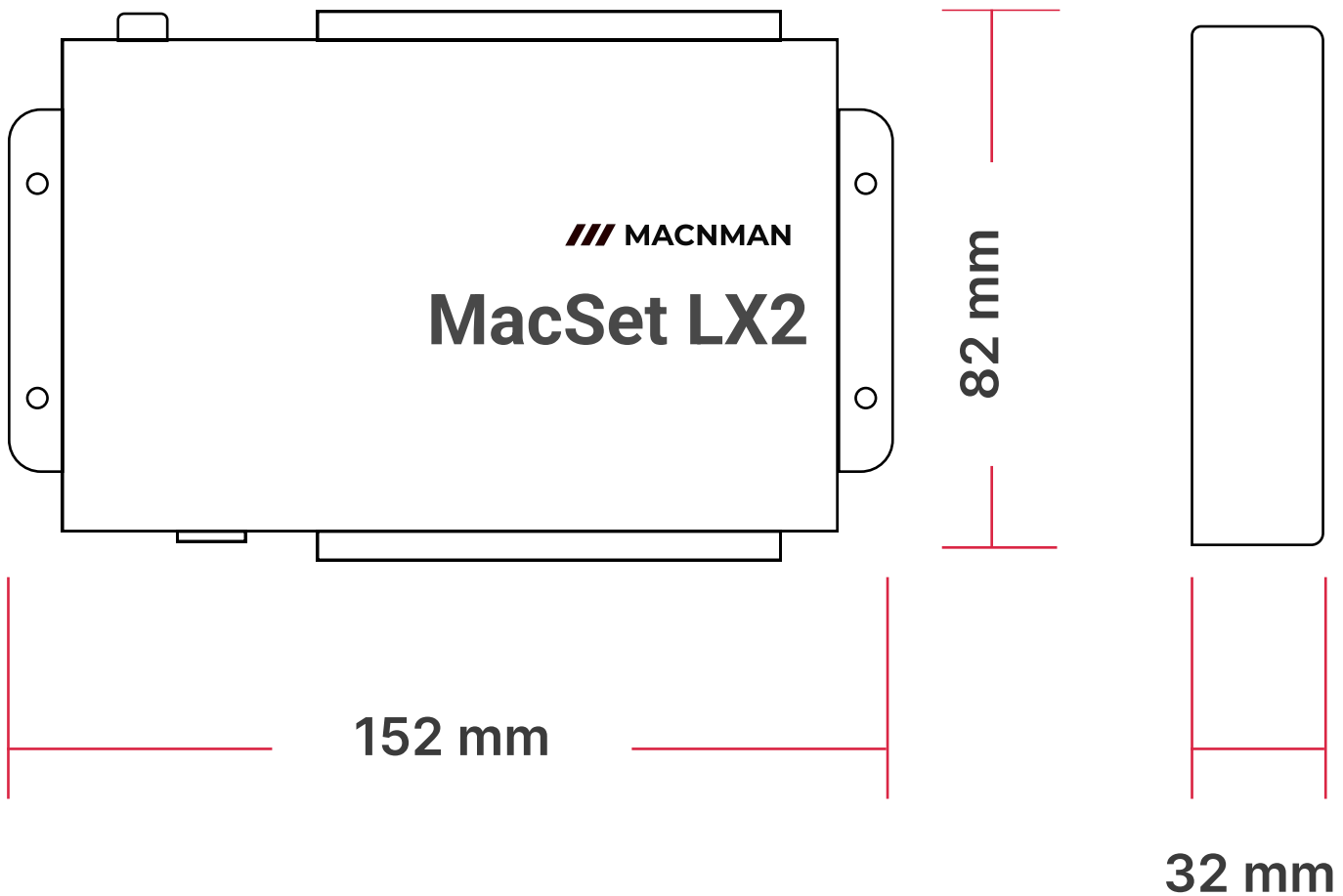
## Models & Ordering Information

Variant Name	Power Source
MacSet LX2	External Power

## Notes

- Power operated models are only available with external probe option
- (\*) Marked accessories are need to be purchased separately
- Only one interface can be used at a time E.g. Only RS485 or Analog Interface

## Device Dimensions






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## Say Hello 🙌

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